

Notice of Allowability	Application No.	Applicant(s)	
	09/697,186	YOKOYAMA ET AL.	
	Examiner	Art Unit	
	Kathleen M Kerr	1652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 9/3/03.
2. ☒ The allowed claim(s) is/are 2,3 and 10-19.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No. _____.
 - (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1 <input type="checkbox"/> Notice of References Cited (PTO-892) | 2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 4 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____. |
| 5 <input type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. _____. | 6 <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9 <input type="checkbox"/> Other _____. |

DETAILED ACTION

Application Status

1. In response to the previous Office action, a Final rejection (mailed on April 4, 2003), Applicants filed a response and after-final amendment received on September 3, 2003. Said amendment cancelled Claims 1 and 4-9. Thus, Claims 2, 3, and 10-19 are pending in the instant Office action and will be examined herein.

Priority

2. As previously noted, the instant application is granted the benefit of priority for the foreign application 309616/1999 filed in Japan on October 29, 1999.

Drawings

3. The drawings filed on January 7, 2003 have been approved by the Draftsmen and are, therefore, entered as formal drawings acceptable for publication upon the identification of allowable subject matter.

Sequence Compliance

4. Applicants filed a substitute sequence listing on September 3, 2003; said listing has been entered in computer readable form and paper copy. Applicants' remarks note that the listing was updated to correct an error in SEQ ID NOs:12-20; however, the error is misstated.

To clarify the record, the Examiner notes that SEQ ID NO:1 (WT*) contains a Tyr at position 80 and a Lys at position 130. The point mutants of SEQ ID NO:1 (SEQ ID NOs:12-20) contain only the changes noted in Table 1 as per the specification as originally filed; no changes

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to residues 80 and 130 are noted. Thus, in each of SEQ ID NOs:12-20, residue 80 should be a Tyr and residue 130 should be a Lys (not the Thr noted in Applicants' remarks of 9/03/2003). Originally filed SEQ ID NOs:12-20 had an Asp at position 80 and a Thr at position 130. These have been corrected to a Tyr at position 80 and a Lys at position 130. The Examiner agrees that no new matter has been added.

Withdrawn - Claim Rejections - 35 U.S.C. § 112

5. Previous rejection of Claims 1 and 20 under 35 U.S.C. § 112, first paragraph, written description, is withdrawn by virtue of Applicants' cancellation of said claim.
6. Previous rejection of Claims 1 and 20 under 35 U.S.C. § 112, first paragraph, scope of enablement, is withdrawn by virtue of Applicants' cancellation of said claim.
7. Previous rejection of Claim 20 under 35 U.S.C. § 112, first paragraph, new matter, is withdrawn by virtue of Applicants' cancellation of said claim.

Summary of Pending Issues

8. All previous objections/rejections are withdrawn by virtue of Applicants' amendment.

EXAMINER'S AMENDMENT

9. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 C.F.R. § 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Rebecca McNeil on October 9, 2003.

Amendments to the Specification

10. The specification has been amended as follows:

a) Delete the title and substitute therefor:

---Mutant Kanamycin Nucleotidyltransferases from *S. aureus*---

Amendments to the Claims

11. Claims 2-3 and 10-19 (all pending) have been amended as follows:

a) Delete Claims 2 and 3 and substitute therefor:

---2. An isolated mutant kanamycin nucleotidyltransferase with improved thermostability as compared to SEQ ID NO:1, comprising the amino acid sequence set forth in SEQ ID NO:2.

3. An isolated mutant kanamycin nucleotidyltransferase comprising the amino acid sequence set forth in SEQ ID NO:3.---

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b) Delete Claims 10-19 and substitute therefor:

~~10~~. An isolated mutant kanamycin nucleotidyltransferase comprising the sequence of SEQ ID NO:1 modified by a mutation selected from the group consisting of:

Met57Leu, Ala62Val, Ser94Pro, Ser203Pro, Asp206Val, His207Gln, Ser220Pro, Ile234Val, Thr238Ala, and combinations thereof;

wherein said nucleotidyltransferase has improved thermostability as compared to SEQ ID NO:1.

~~11~~⁴. An isolated mutant kanamycin nucleotidyltransferase comprising the amino acid sequence set forth in SEQ ID NO:12.

~~12~~⁵. An isolated mutant kanamycin nucleotidyltransferase comprising the amino acid sequence set forth in SEQ ID NO:13.

~~13~~⁶. An isolated mutant kanamycin nucleotidyltransferase comprising the amino acid sequence set forth in SEQ ID NO:14.

~~14~~⁷. An isolated mutant kanamycin nucleotidyltransferase comprising the amino acid sequence set forth in SEQ ID NO:15.

~~15~~⁸. An isolated mutant kanamycin nucleotidyltransferase comprising the amino acid sequence set forth in SEQ ID NO:16.

~~16~~⁹. An isolated mutant kanamycin nucleotidyltransferase comprising the amino acid sequence set forth in SEQ ID NO:17.

~~17~~¹⁰. An isolated mutant kanamycin nucleotidyltransferase comprising the amino acid sequence set forth in SEQ ID NO:18.

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¹¹
~~18.~~ An isolated mutant kanamycin nucleotidyltransferase comprising the amino acid sequence set forth in SEQ ID NO:19.

¹²
~~19.~~ An isolated mutant kanamycin nucleotidyltransferase comprising the amino acid sequence set forth in SEQ ID NO:20.---


Conclusion

12. Claims 2, 3, and 10-19, as amended in the Examiner's amendment above authorized by Applicants' representative, are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kathleen M Kerr whose telephone number is (703) 305-1229. The examiner can normally be reached on Monday through Friday, from 8:30am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathupura Achutamurthy can be reached on (703) 308-3804. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9307 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.


PONNATHAPUACHUTAMURTHY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1900

KMK
October 9, 2003